

Patent Claims:

1. A polypeptide having the biological activity of a histidine phosphatase which has a high specificity for phosphohistidine and a molecular weight of 13.000 – 15.000, obtainable by purification from mammalian tissue by at least one anion exchange chromatography, one gel filtration and one affinity chromatograph step.
2. A polypeptide according to claim 1 comprising at least the amino acid sequence motif
DCECLGGGRISHQSQD
3. A polypeptide according to claim 1 comprising at least the amino acid sequence motif
DCECLGGGRISHQSQDX¹KIHVYGYSMX²YGX³AQH
wherein X¹ = K or R, X² = A or G and X³ = P or R.
4. A polypeptide according to claim 1 comprising at least the amino acid sequence motif
YHADIYDKVSGDMQKQGCDCECLGGGRISHQSQDKKIHVYGYSM.
5. A polypeptide having the biological activity of a histidine phosphatase which has a high specificity for phosphohistidine and a molecular weight of 13.000 – 15.000, comprising the following amino acid sequence:
(M) AVADLALIPDVIDSDGVFKYVLIRVHSAPRSGAPAAESKEIVRGYKWAIEYH
ADIYDKVSGDMQKQGCDCECLGGGRISHQSQDKKIHVYGYSMAYGPAQHAISTEK
IKAKYPDYEVTWANDGY.
6. A polypeptide having the biological activity of a histidine phosphatase which has a high specificity for phosphohistidine and a molecular weight of 13.000 – 15.000, the amino acid sequence of which has a homology of 64 – 99% compared with the sequence depicted in claim 3.

7. A polypeptide according to claim 6 comprising the following amino acid sequence:

AAAGLAQIPDVIDSDGVFKYVLIRVHAAPPSEAPGGESKDIVRGYKWAHEYHADI
YDKVSGELQKKGHDCECLGGGRISHQSQDRKIHVYGYSMGYGRAQHSVSTEKIRA
KYPDYEVTWADDGY.

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8. A DNA coding for a polypeptide of any of the claims 1 - 7.

9. A DNA according to claim 8 comprising the nucleotide sequence:

(ATG) GCGGTGGCGGACCTCGCTCTCATTCCTGATGTGGACATCGACTCCGACGG
CGTCTTCAAGTATGTGCTGATCCGAGTCCACTCGGCTCCCCGCTCCGGGGCTCCG
GCTGCAGAGAGCAAGGAGATCGTGCGCGGCTACAAGTGGGCTGAGTACCATGCGG
AGATETACGACAAAGTGTCGGGCGACATGCAGAAGCAAGGCTGCGACTGTGAGTG
TCTGGGCGGCGGGCGCATCTCCCACCAGAGTCAGGACAAGAAGATTCACGTGTAC
GGCTATTCCATGGCCTATGGTCCTGCCCAGCACGCCATTTCAACTGAGAAAATCA
AAGCCAAGTACCCCGACTACGAGGTCACCTGGGCTAACGACGGCTAC

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10. Pharmaceutical preparation comprising a polypeptide according to any of the claims 1- 7, where appropriate, together with suitable excipients, carriers and other active ingredients.

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11. An antibody directed to a polypeptide according to claims 1- 7.

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